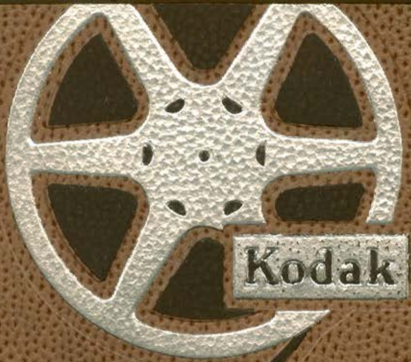
LIST PRICE $1.75

Kodak

CINE PHOTOGUIDE

Complete on-the-spot information for movie making, outdoors and in, with Kodachrome and black-and-white films. Contains dial computers, tables and brief, to-the-point text for both general and special use.

EASTMAN KODAK COMPANY



CINE PHOTOGUIDE

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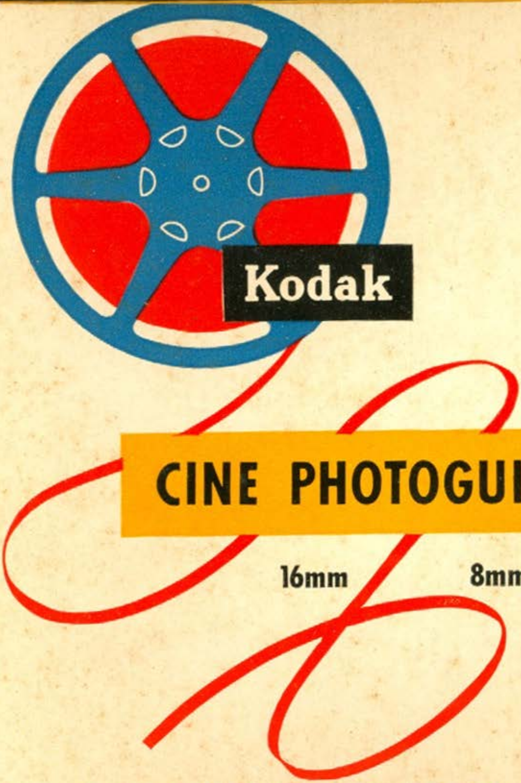

CINE PHOTOGUIDE

16mm 8mm

EASTMAN KODAK COMPANY
Rochester 4, New York

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DAY, COLOR
DAY, B & W
INDOORS
INDEXES
STORY
DEPTH
CLOSE-UP
PORTRA FACTOR

WHENEVER YOU MAKE MOVIES

Take this Cine Photoguide with you. It will help you make clear and interesting movies. It applies primarily to color because most home movies are made on color film. The first half deals with exposure. Pages 16 to 19 give helpful tips on making your movies interesting. Things you should know for more advanced movie making complete the guide. Always use the check-list on page 32.

Your approach to exposure. Good exposure is essential for good movies. Should you use a guide, a meter, or your own judgment? There are times when each is best. The computers and information in this guide will help you approach the problem under a wide variety of lighting conditions and subject situations.

OUTDOORS

Sunlight. Bright or hazy sunlight, best for most pictures in color or in black-and-white, is practically the same in New York or Florida, Panama or Alaska. It's the subject that makes the difference in lens setting: e.g., the setting for a sunlit, sandy beach is one opening smaller than that for a sunlit, dark-colored subject. A guide may be followed confidently. ***No Sunlight.*** The lighting condition called "Cloudy Bright" applies to a wide range of lighting strengths often difficult to judge. A photoelectric exposure meter, properly used, can be helpful here. Its interpretation requires some experience.

INDOORS

You can make simple indoor movies with two flood lamps by using the computer on page 11. For more complicated lighting setups, a photoelectric exposure meter is almost a necessity.

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EXPOSURE: UNUSUAL OUTDOOR LIGHTING

These instructions are for Kodachrome Film, Daylight Type, exposed at 16 frames per second. The conditions described are unusual in the sense that they vary widely from those customarily described in an exposure computer.

Near Sunrise and Sunset. Sunlight at these times is less intense than during the middle of the day, and its color is orange or reddish. Faces will acquire an extra ruddiness, but some scenic subjects, especially in winter, may be much more beautiful in this light. If such slanting sunlight is playing upon your subject, try *f*/5.6 fifteen minutes before sunset; *f*/2.8 just as the sun sets; *f*/1.9 or *f*/1.4 after it sets.

In Fog. In dense fog, with sunlight overhead but not breaking through, try *f*/2.8. In a thin fog, consider the condition as cloudy bright, and set the lens at *f*/4.

In Deep Woods, or Under a Porch Roof or other obstruction which shuts out light from the sky, results are doubtful at lens openings smaller than *f*/1.9. Try *f*/1.9 on a clear sunny day—*f*/1.4 if the sky is hazy. Subject colors will be affected by the color of objects which reflect light to your subject, or by the filtering effect of green leaves. The Kodak Skylight Filter may partially correct this effect.

Movies from Airplanes. The basic exposure in bright sunlight on a clear day at altitudes around 1000 feet is the same as for average scenes on the ground: *f*/8. At 3000 feet, set the lens opening midway between *f*/8 and *f*/11; at 4000 feet and higher, use *f*/11. Take care that the camera does not touch the plane window or any other part of the aircraft, as vibration will spoil your shot. A Kodak Skylight Filter over the lens will lessen excessive bluishness likely to be found in higher-altitude shots.

Movies from Mountain Tops. Exposure for people and other nearby subjects is the same as at lower altitudes.

EXPOSURE: UNUSUAL OUTDOOR LIGHTING

General scenery should be considered a light subject because of the wide arc of open sky and the unusually clear atmosphere. Distant subjects, such as other mountains and valleys, will have little or no shadow detail. In sunlight, set the lens opening between f/8 and f/11. The Kodak Skylight Filter over the lens during exposure will offset bluishness caused by distant atmospheric haze.

In the Tropics. Sunlight is not appreciably stronger, but shadows on side- or back-lighted subjects may be sharply defined and extra dark. When these shadows occur in important parts of the subject, use half a lens opening wider than ordinarily, to improve the shadows.

In the American Southwest. Light-colored rocks and canyon walls tend to fill in and soften shadows by reflecting light into them. No increase in lens opening for shadow areas is needed here.

In Alaska and the Far North. Sunlight strength in summer will not be significantly different from that found throughout the United States. Its color will be warmer (more yellow, orange, or reddish) earlier in the afternoon. Follow the Daylight Exposure Computer from about 6 in the morning until 6 in the evening in summer months. As early as 4 a.m. or as late as 8 p.m., use from half to one lens opening wider, if the reddish light is not objectionable.

When You Have to Guess. Under conditions not covered by guides, and when you have no meter, make the best possible estimate. If the importance of the subject justifies it and if the action can be repeated, make an exposure at the lens opening you estimate to be correct, another at an opening one stop wider, and a third at an opening one stop narrower. One usable exposure should result if this procedure can be followed.

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INSTRUCTIONS FOR USING THE

Note the Lighting Condition. Things which affect the intensity of daylight are shown at the top of the computer page. Decide which condition applies to the scene you plan to shoot. Set the red arrow on the dial opposite the black dot in that lighting-condition panel.

Decide on Your Subject Type. For estimating exposure, "subject type" refers only to whether your subject is dark, average, or light.

DARK subjects are nearby people in dark clothing, brunets, dark foliage, flowers, animals, or buildings.

AVERAGE subjects are nearby people, gardens, houses, scenes, not in the shade. Light and dark objects are in about equal proportions. Use this class when in doubt.

LIGHT subjects are blondes, nearby people in marine, beach, and snow scenes, and distant scenery.

Set the Lens Opening to agree with the f-number indicated by one of the arrows which extend out from the subject types. For dark subjects, set your lens at the opening indicated by the left arrow. If your subject is average, use the center arrow; if light, use the arrow to the right.

These dial settings apply to front lighting (where the sun is behind the camera) and to normal shutter speed (16 frames a second). They also apply for the daylight use of Kodachrome Film, Type A, with the Kodak Daylight Filter for Kodak Type A Color Films over the lens.

For 8 frames a second, use one lens opening smaller.
For 24 frames a second, use half a lens opening wider.
For 32 frames a second, use one lens opening wider.
For 64 frames a second, use two lens openings wider.

Example: For an average subject, with bright sun behind you —set the red arrow at the "Bright Sun" panel. Now the "Average Subjects" Arrow points at *f*/8. Set your camera lens at this opening, and the exposure will be correct.

DAYLIGHT EXPOSURE COMPUTER

BEST FOR MOST PICTURES

BRIGHT SUN	HAZY SUN	CLOUDY BRIGHT	OPEN SHADE
Strong Shadows	Indistinct Shadows	No Sun No Shadows	Clear Sky

COLOR and BLACK-&-WHITE:
For front-lighted subjects (lighted by sun behind camera) and for subjects in **cloudy bright** light or **open shade.**

COLOR: Side- or back-lighted subjects, Bright Sun.

COLOR: Back-lighted close-ups, Bright Sun.
BLACK-&-WHITE: Side- or Back-lighted subjects, Bright Sun.

KODACHROME FILM DAYLIGHT TYPE

Read dial below for Kodachrome only.
See page 2 for black-and-white settings.

DARK **AVERAGE SUBJECTS** **LIGHT**

f/2.8 · 3.5 · 4 · 5.6 · 8 · 11 · 16 · 22

LENS OPENINGS—f/ NUMBERS

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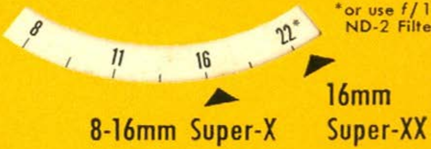
EXPOSURE: UNUSUAL SUBJECTS OUTDOORS

These instructions are for Kodachrome Film, Daylight Type, at a camera speed of 16 frames per second. The following subjects are unusual in the sense that they vary widely from common subjects which can be listed in a computer.

Sunrise and Sunsets as Subjects. Clouds and sky are the subject, so base the exposure on them rather than on any foreground object. Exposure is not critical; richer, more dramatic colors result from lesser exposures. Don't shoot at the sun except when it is behind clouds or is so obscured by haze that you can look at it without discomfort. Most exposures range from f/2.8 to f/4, depending upon the darkness of the clouds. The glow in the sky before sunrise or after sunset can be filmed at f/1.9 if the sky is light and open. The foreground, unless it is largely skylight reflected from a lake or river, will be greatly underexposed, and therefore rendered as a silhouette.

OUTDOOR SETTINGS FOR BLACK-AND-WHITE FILMS

Set outdoor dial on page 7 for lighting conditions.
Read lens setting in window below.



*or use f/11 with ND-2 Filter

EXPOSURE: UNUSUAL SUBJECTS OUTDOORS

Rainbows. Expose as a normal subject in sunlight, at f/8. If it is cloudy, half a lens opening more exposure can be given without losing too much of the rainbow's color.

Beach and Snow Scenes. For nearby people in sunlight, expose midway between f/8 and f/11. For distant shots on sand or snow, use f/11. No increase in exposure is needed for either side or back lighting. Surroundings act as a reflector, filling in and softening shadows.

Rainstorms and Blizzards can be filmed from a protected place where rain or snow can't get on your lens. Try f/2.8 for a light shower, f/1.9 if clouds are very dark. In heavy snowstorms, try f/4. Neither rain nor snow registers well in movies except as a manifestation of weather—raindrops in puddles; snow whirling in the wind and drifting.

Waterfalls, Big Waves. These record best in semi-slow motion. The subject is light. Expose midway between f/8 and f/11 at 16 frames; f/8 at 24 frames; midway between f/5.6 and f/8 at 32 frames, when the subject is in full sunlight. Run your camera faster the closer you get.

The following four subjects will record somewhat better on Kodachrome Film, Type A. Use Daylight Type if it is in your camera, rather than miss the pictures.

Fireworks. Bright bursts close to the camera can be recorded at f/2.8; darker or more-distant displays, at f/1.9.

Neon and Other Electric Signs. In most places, use f/2.8. On rainy nights amid many electric signs, reflections build up light enough for people to record at f/1.9.

Night Fires, Campfires. Use f/1.9 for either subject. When flames form the background, foreground objects will be silhouetted. For best results, get close enough to fill your viewfinder with the subject. People near a fire can sometimes be recorded at f/1.4.

MAKE YOUR MOVIES INTERESTING

The Nature of Movies. Movies mean what their name says: motion, action, subjects that move. But animated snapshots in which the subject, making a face, walks toward the camera, won't make a movie. The movement must have meaning. It must deal with events of interest: experiences, adventures, incidents. From this it is clear that movies are a story-telling medium.

Story Telling is not limited to fiction and plots. It is found in diaries, letters, reports, essays, descriptions—all suited to movie treatment. In movies, you simply tell your story with a movie camera instead of in writing or in conversation.

Your Story Idea can deal with the growth of your children (diary), the record of your vacation (letter), the development of your garden (report); or whatever interests you. This is the theme of your movie. It determines what you will shoot with your camera.

Every Shot Should Have a Purpose, and should deal with your theme. It takes a considerable number of movie shots to tell a story, just as it takes many sentences to write a story on a typewriter. Some movie shots tell where your story takes place, some describe what is happening, others show who is in the story. Some shots show why certain actions took place, others emphasize important details, and still others remind us from time to time where all this is taking place.

Variety is an essential ingredient in interesting movies. It is actually a by-product of making each of your shots with a specific purpose in mind. It can be increased by changing your viewing angle (high or low, right or left) frequently. When everything is shot from eye-level and from a single position, it soon becomes very dull. Camera distance from your subject, or the viewing angle, or both, should always be changed for your next shot. Variety is also produced by running the camera longer for subjects which take longer to grasp, shorter times for those recognized instantly.

Basic Movie Shots are like the newspaper reporter's first questions: "*Who, what, where?*" Every movie, however simple, is concerned with those same questions.

Who is the most important type of shot in home movies. Your camera is close, to see facial expressions, to see what emotions animate your subject. Your movie needs many of these shows, known as "close-ups."

What most frequently refers to what is *happening*. This type shot shows action that means something. It is filmed from a position far enough away to show all the action clearly, but only enough background is included to associate the action with the shot which precedes it and the one which follows it. This is the "medium shot."

Where is the type shot that shows where the action takes place. Is the scene a beach, the mountains, your back yard, or your dining room? Such a shot is known as a "long shot" because it is made from a relatively long distance to show all the location. The term is relative, for a long distance in a dining room might be extremely close up in a mountain area. It is necessary to use a "where" shot when some new person enters the story. A new person appearing without such an introduction confuses your audience.

Organizing Your Movies. The Movie Organizer on page 19 gives you a simple formula for your first organized movies. It can be used to make scenarios, or it can be consulted before you make each shot. As you set the top arrow opposite a given type of shot, the other arrows indicate how long the shot should run, how far your camera should be from your subject, and the purpose of the shot.

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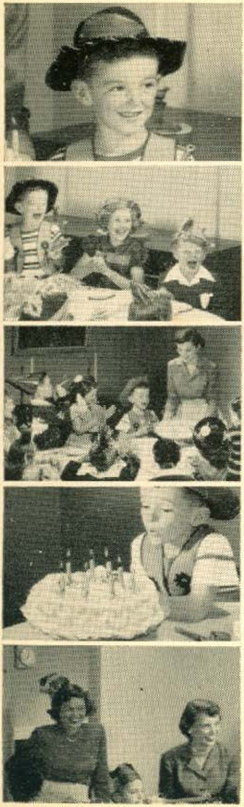
ORGANIZING A MOVIE STORY



A Birthday Party is described in movie shots at the left.

Who is the principal character in our story? What are his feelings? This close-up from about 6 feet gives added meaning to the shot which follows.

What is going on? Cheers, horn-blowing, laughter, plenty of action and movement are shown in this medium shot, taken from a distance of about 10 feet.

Where the story takes place is shown in this long shot, typically taken from about 20 or 25 feet from the scene through a doorway into the next room.

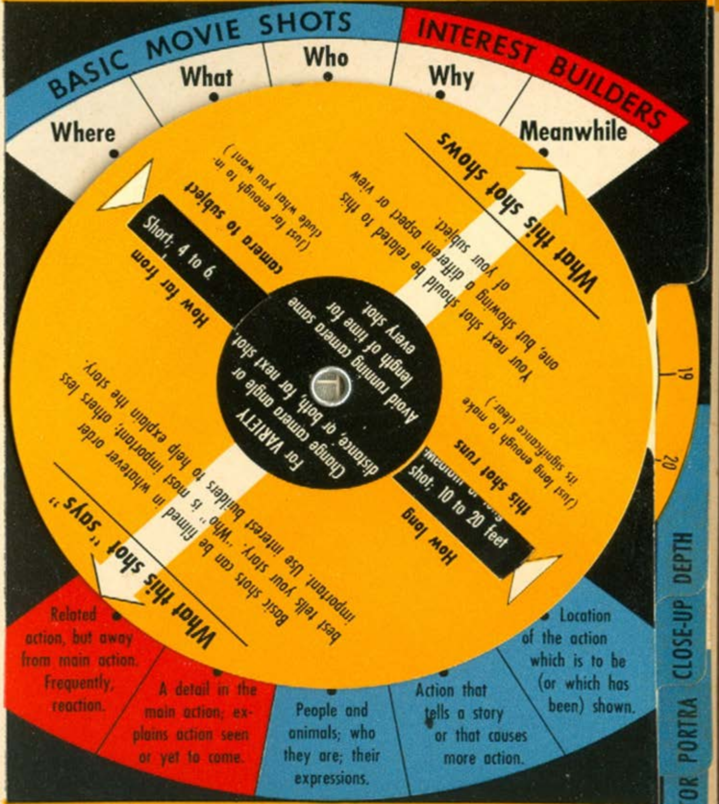
INTEREST BUILDERS

Two other types of shots will add interest to your movies:

Why an action takes place is shown in extreme close-ups, usually. This makes things clearer, more specific, as in this instance, eight candles on the cake.

Meanwhile related but separate actions will build up your story. Here we have cut away to show some grownups' reactions — feelings of real pleasure.

KODAK MOVIE ORGANIZER



BASIC MOVIE SHOTS

Where

What

Who

INTEREST BUILDERS

Why

Meanwhile

What this shot "says"

Basic shots can be filmed in whatever order best tells your story. "Who" is most important. Use interest builders to help explain the story.

What this shot "says"

Basic shots can be filmed in whatever order best tells your story. "Who" is most important; others less important. Use interest builders to help explain the story.

What this shot shows

Your next shot should be related to this one, but showing a different aspect or view of your subject.

For VARIETY

Change camera angle or distance, or both, for next shot.

Avoid running camera same length of time for every shot.

How far from camera to subject

Short; 4 to 6

(Just far enough to include what you want.)

How long this shot runs

Medium or long shot; 10 to 20 feet

(Just long enough to make its significance clear.)

Location of the action which is to be (or which has been) shown.

Action that tells a story or that causes more action.

People and animals; who they are; their expressions.

A detail in the main action; explains action seen or yet to come.

Related action, but away from main action. Frequently, reaction.

"Edit" in the camera by using this movie organizer

TO DETERMINE DEPTH OF FIELD

Depth of Field is the distance between points nearest to and farthest from the camera that appear in sharp focus. Several factors affect depth of field. Study of the computer will make these factors clear:

(1) When your lens is set at a large opening, the depth of field is less than it is at smaller openings.

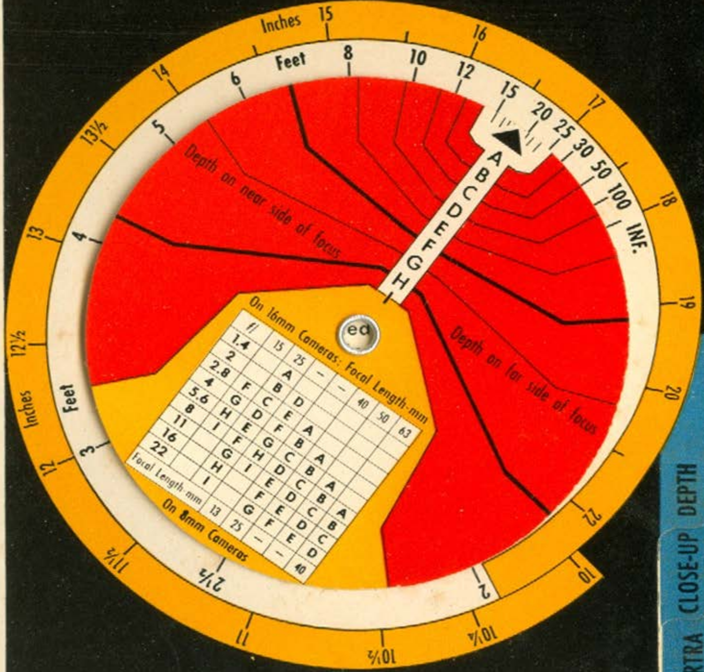
(2) Depth of field becomes less as the image size increases, whether the camera approaches the subject or whether a lens of longer focal length is used.

Determining Depth of Field. Set the black arrowhead at the distance from your camera to your subject. Lines to the left of the arrowhead represent distances to the near side of focus at various apertures; those to the right, distances to the far side of focus. Apertures are marked *A* to *I* so that depth for different lenses can be found. Read down in the table at the bottom of the dial for 16mm cameras; read up for lenses used on 8mm cameras.

Example: For a 16mm camera using the standard 25mm lens, *A* represents *f*/1.4, *B f*/2, and so on, in accord with the table. Our subject is outdoors, 10 feet away. With Kodachrome Film, Daylight Type, *f*/8 would be the proper aperture for an average sunlit subject. Set the black arrowhead at 10 feet. Line *F* represents *f*/8. Depth of field for these conditions extends from about 5 to about 200 feet.

Example: For an 8mm camera using the standard 13mm lens, read up from the bottom of the table in the column marked "13." This shows that *D* represents *f*/2, which corresponds to the maximum opening for most 8mm camera lenses, *f*/1.9. Line *H* is *f*/8 for this lens on an 8mm camera. When the right-side end of line *H* is put at infinity, it will be seen that with the lens focused at 5½ feet, everything from about 2¾ feet to infinity will be in focus.

DEPTH OF FIELD COMPUTER



On 16mm Cameras: Focal Length-mm

f/	15	25	—	—	40	50	63
1.4		A					
2		B	D				
2.8	F	C	E	A			
4	G	D	F	B	A		
5.6	H	E	G	C	B	A	
8	I	F	H	D	C	B	A
11		G	I	E	D	C	B
16		H		F	E	D	C
22		I		G	F	E	D
Focal Length-mm			13	25	—	—	40

On 8mm Cameras

Bold figures are distances in feet; light figures are distances in inches.

FACTOR
PORTRA
CLOSE-UP
DEPTH

MAKING EXTREME CLOSE-UPS

Most movie cameras, other than the simpler types with fixed-focus lenses, can be focused on objects down to about 2 feet from the camera. This permits filling the screen with a subject about 6 by 8 inches—normally a big close-up. Since some things, such as flowers, are much smaller than this, special methods must be used for getting a large image of a very small subject. In all extreme close-up photography measure from the subject to the film plane.

With Kodak Portra Lenses 2+ and 3+, extreme close-ups can be made. Use the data on pages 24 and 25. No change in exposure is necessary when using a Portra Lens.

Long-Focus Lenses produce a larger image than the standard lens—for nearby, as well as for distant, subjects. If a lens has a focal length 2½ times that of the standard lens, it will produce an image 2½ times as large when used at the same distance. See [illegible] the field sizes, pages 26 and 27.

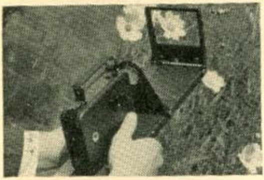
Lens Spacer Rings permit moving the lens a still longer, but accurately known, distance out from the film. Full-screen images of objects ½ inch across are possible.

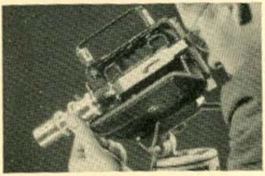
Lens Extension Tubes are similar accessories, but they hold the lens as much as several inches in front of the camera. Objects only a few thousandths of an inch across—such as the edge of a dime—will fill the screen completely. A Focusing Finder or reflex finder is also necessary.

Effective Aperture. In focusing by moving the lens away from the film plane, the ratio of the lens-to-film distance to the distance across the lens opening becomes greater. This reduces the strength of the light reaching the film. When the subject is focused closer than 8 times the focal length of the lens, the labeled f-number value no longer applies. A new "effective" aperture value must be calculated from the changed ratio. The computer on page 31 does this.

CLOSE-UP VIEW FINDING

The Viewfinder on most cameras shows the field covered by the camera lens when the subject is more than about six feet away. At closer distances, if the camera is aimed with the viewfinder, the camera's lens will "see" lower than your finder, because it is lower on the camera body, and the top of your subject matter will be cut off. Aim slightly high when close to your subject. Keep all of your subject below the upper cutoff arrow in the finder when you are 6 feet away; below the lower arrow when you are only two feet away.





The Cine-Kodak Titler, designed primarily for title making with Cine-Kodak cameras, can be used to simplify the taking of extreme close-ups of such things as flowers. The easel which takes the title card outlines the area covered by the lens, but does not show in your pictures. If you are handy with tools, you can make wire framing devices for use with Kodak Portra Lenses. These can be used in the same manner as the titler.

The Focusing Finder. Cine-Kodak Magazine Cameras, both 8mm and 16mm, can be focused and centered accurately through the lens on close-up subjects by using the Focusing Finder, inserted into the magazine chamber, then replaced with the magazine. The camera must be mounted on a tripod or otherwise fixed in position.

CLOSE-UP FIELD SIZES, 16mm CAMERAS

KODAK CINE EKTAR LENSES ON 16MM CINE-KODAK CAMERAS*

Distance from Film to Subject		15mm f/2.5				25mm f/1.4 and f/1.9				40mm f/1.6				50mm f/1.6				63mm f/2.0				102mm f/2.7			
		Width		Height		Width		Height		Width		Height		Width		Height		Width		Height		Width		Height	
ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
10	—	–	—	–	—	3	8 1/2	2	9 1/2	2	4	1	9	1	10 1/2	1	5	1	5 1/2	1	1	–	10 3/4	–	8 1/8
8	—	–	—	–	—	2	11 1/2	2	2 1/2	1	10 1/2	1	4 3/4	1	6	1	1 1/2	1	1 3/4	–	10 3/8	–	8 1/2	–	6 3/8
6	—	3	7	2	8 1/4	2	2 1/2	1	7 3/4	1	4 3/4	1	1/2	1	1 1/2	–	10 1/8	–	10 1/4	–	7 5/8	–	6 1/4	–	4 5/8
5	—	–	—	–	—	1	10	1	4 1/2	1	1 3/4	–	10 1/4	–	11 1/4	–	8 3/8	–	8 3/8	–	6 1/4	–	5 1/16	–	3 13/16
4	—	2	4 1/2	1	9 1/4	1	5 1/2	1	1	–	10 7/8	–	8 1/8	–	9	–	6 3/4	–	6 5/8	–	4 15/16	–	3 15/16	–	2 15/16
3 1/2	—	1	9 1/4	1	3 3/4	1	3 1/4	–	11 3/8	–	9 3/8	–	7	–	7 7/8	–	5 7/8	–	5 11/16	–	4 1/4	–	3 3/8	–	2 1/2
3	—	–	—	–	—	1	1	–	9 5/8	–	8	–	5 15/16	–	6 3/4	–	5	–	4 3/4	–	3 9/16	–	2 25/32	–	2 3/32
2 3/4	—	–	—	–	—	–	11 3/4	–	8 3/4	–	—	–	—	–	—	–	—	–	4 5/16	–	3 1/4	–	—	–	—
2 1/2	—	1	5 1/2	1	1	–	10 5/8	–	8	–	6 1/2	–	4 7/8	–	5 5/8	–	4 1/8	–	3 7/8	–	2 7/8	–	—	–	—
2 1/4	—	–	—	–	—	–	9 1/2	–	7 1/8	–	5 13/16	–	4 15/16	–	—	–	—	–	3 3/8	–	2 17/32	–	—	–	—
2	—	1	1 3/4	–	10 3/8	–	8 3/8	–	6 1/4	–	5 1/16	–	3 3/4	–	4 3/8	–	3 3/8	–	2 15/16	–	2 3/16	–	—	–	—
—	22	–	—	–	—	–	7 5/8	–	5 11/16																
—	20	–	—	–	—	–	6 7/8	–	5 1/8																
—	19	–	—	–	—	–	6 1/2	–	4 13/16																
—	18	–	10 1/4	–	7 5/8	–	6 1/8	–	4 9/16																
—	17	–	—	–	—	–	5 3/4	–	4 1/4																
—	16	–	—	–	—	–	5 5/16	–	4																
—	15	–	8 3/8	–	6 1/4	–	4 15/16	–	3 11/16																
—	14	–	—	–	—	–	4 9/16	–	3 7/16																
—	13	–	—	–	—	–	4 3/16	–	3 1/8																
—	12	–	6 1/2	–	4 7/8	–	3 13/16	–	2 27/32																
—	10	–	5 5/16	–	3 15/16	–	—	–	—																
—	9	–	4 11/16	–	3 1/2	–	—	–	—																
—	8	–	4 1/16	–	3 1/16	–	—	–	—																
—	7 1/2	–	3 3/4	–	2 13/16	–	—	–	—																
—	7	–	3 7/16	–	2 19/32	–	—	–	—																
—	6 1/2	–	3 1/8	–	2 11/32	–	—	–	—																
—	6	–	2 27/32	–	2 1/8	–	—	–	—																

*Distances measured from subject to film plane, except for the 50mm *f*/1.6 lens, for which they are measured from the engraved focusing line on the lens barrel.

Longer-focus Cine Kodak lenses from 40mm up may be focused closer than the shortest distance shown on the focusing scale. At this point raise the spring plunger, continue rotating the focusing ring, and use a reflex or focusing finder to make the final focusing adjustment. Field sizes less than half the minimums given here can be obtained for the 40-, 50-, and 63mm lenses.

CLOSE-UP FIELD SIZES, 8mm CAMERAS

Distance* to subject	9mm., f/2.7				13mm., f/1.9				25mm., f/1.9				38mm., f/2.5				50mm., f/1.6				63mm., f/2.7			
	Width		Height		Width		Height		Width		Height		Width		Height		Width		Height		Width		Height	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
10 feet	4	7¾	3	6	3	5¼	2	7	1	8½	1	3¼	1	1¾	-	10⅜	-	10⅜	-	7¾	-	8⅛	-	6⅛
8 feet	3	8¾	2	9½	2	9	2	¾	1	4¼	1	¼	-	11	-	8¼	-	8¼	-	6¼	-	6½	-	4⅞
6 feet	2	9½	2	1¼	2	¾	1	6½	1	¼	-	9⅛	-	8¼	-	6⅛	-	6⅛	-	4⅝	-	4¾	-	3⅝
5 feet	-	—	-	—	-	—	-	—	-	—	-	—	-	6⅞	-	5⅛	-	5⅛	-	3⅞	-	4	-	3
4½ feet	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	4⅝	-	3½	-	—	-	—
4 feet	1	10½	1	5	1	4½	1	½	-	8⅛	-	6⅛	-	5½	-	4⅛	-	4⅛	-	3⅛	-	3⅛	-	2⅜
3¾ feet	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—
3½ feet	-	—	-	—	-	—	-	—	-	—	-	—	-	4¾	-	3⅝	-	3⅝	-	2¾	-	—	-	—
3 feet	1	5	1	¾	1	½	-	9¼	-	6	-	4½	-	4	-	3	-	3	-	2¼	-	2¼	-	1¾
2½ feet	-	—	-	—	-	—	-	—	-	—	-	—	-	3⅜	-	2½	-	2½	-	1⅞	-	1⅞	-	1⅜
2¼ feet	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—
2 feet	-	11⅜	-	8⅝	-	8¼	-	6⅛	-	4	-	3	-	2⅝	-	2	-	2	-	1½	-	1½	-	1⅛
1½ feet	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	—	-	1	-	¾

*Distances measured from front of camera for all lenses except 38 mm. f/2.5, and 50 mm. f/1.6, lenses for which they are measured from the engraved focusing line on the lens barrel.

PORTRA LENSES ON KODAK CINE EKTAR 25mm LENS

SUBJECT DISTANCE AND APPROXIMATE FIELD SIZE		
KODAK PORTRA LENS 1+		
Camera Lens Focus Scale Setting	16mm Cine-Kodak Cameras	
	Distance from Subject to Film Plane in Inches	FIELD SIZE IN INCHES
		Kodak Cine Ektar 25mm f/1.4 and f/1.9 Lenses
14 in.	$11\frac{1}{2}$	$2\frac{7}{8} \times 3\frac{7}{8}$
13 in.	11	$2\frac{1}{2} \times 3\frac{5}{16}$
12 in.	$10\frac{3}{16}$	$2\frac{3}{16} \times 3\frac{1}{16}$
3 ft.	—	—
2 ft.	—	—
KODAK PORTRA LENS 2+		
22	—	—
20	—	—
18	$11\frac{11}{16}$	$2\frac{7}{16} \times 3\frac{1}{4}$
16	$11\frac{1}{8}$	$2\frac{1}{4} \times 3\frac{5}{64}$
14	$10\frac{5}{16}$	$2\frac{3}{32} \times 2\frac{13}{16}$
12	$9\frac{1}{2}$	$1\frac{15}{16} \times 2\frac{19}{32}$
KODAK PORTRA LENS 3+		
27	$11\frac{13}{16}$	$2\frac{15}{32} \times 3\frac{5}{16}$
24	$11\frac{3}{8}$	$2\frac{3}{8} \times 3\frac{3}{16}$
22	11	$2\frac{19}{64} \times 3\frac{3}{32}$
20	$10\frac{5}{8}$	$2\frac{3}{16} \times 2\frac{15}{16}$
18	$10\frac{1}{4}$	$2\frac{3}{32} \times 2\frac{51}{64}$
16	$9\frac{7}{8}$	$1\frac{15}{16} \times 2\frac{19}{32}$
14	$9\frac{5}{16}$	$1\frac{13}{16} \times 2\frac{27}{64}$
12	$8\frac{1}{2}$	$1\frac{41}{64} \times 2\frac{13}{64}$

PORTRA LENSES ON 25- AND 13mm EKTANON LENSES

KODAK PORTRA LENSES ON CINE-KODAKS SIXTEEN WITH 25mm *f*/1.9 LENSES

Camera Lens Focus Scale Setting in Feet	Portra Lens 1+		Portra Lens 2+		Portra Lens 3+	
	Distance of Subject to Lens in Inches	Field Size in Inches	Distance of Subject to Lens in Inches	Field Size in Inches	Distance of Subject to Lens in Inches	Field Size in Inches
Inf.	—	—	19½	5⅝x7½	13	3¾x5
50	—	—	19⅛	5⅜x7¼	12⅞	3⅝x4⅞
25	—	—	18½	5¼x7	12½	3½x4¾
15	—	—	17¾	5 x6¾	12¼	3½x4⅝
10	—	—	16⅞	4¾x6⅜	11⅞	3⅜x4½
8	—	—	16⅜	4⅝x6¼	11½	3¼x4⅜
6	—	—	15½	4⅜x5⅞	11⅛	3⅛x4¼
4	21⅜	6⅛x8⅛	14	4 x5¼	10⅜	2⅞x3⅞
3	18½	5¼x7	12⅝	3½x4¾	9½	2¾x3⅝
2	14⅜	4⅛x5½	10½	3 x4	8¼	2⅜x3¼

KODAK PORTRA LENSES ON CINE-KODAKS EIGHT WITH 13mm *f*/1.9 LENSES

Camera Lens Focus Scale Setting in Feet	Portra Lens 1+		Portra Lens 2+		Portra Lens 3+	
	Distance of Subject to Lens in Inches	Field Size in Inches	Distance of Subject to Lens in Inches	Field Size in Inches	Distance of Subject to Lens in Inches	Field Size in Inches
Inf.	—	—	19½	5 x6¾	13	3⅜x4½
50	—	—	19⅛	4⅞x6½	12⅞	3⅜x4⅜
25	—	—	18½	4¾x6⅜	12½	3¼x4⅜
15	—	—	17¾	4⅝x6⅛	12¼	3¼x4½
10	—	—	16⅞	4⅜x5⅞	11⅞	3⅛x4⅛
8	—	—	16⅜	4¼x5⅝	11½	3 x4
6	—	—	15½	4 x5⅜	11⅛	2⅞x3⅞
4	21⅜	5⅝x7½	14	3⅝x4⅞	10⅜	2⅝x3½
3	18½	4⅞x6½	12⅝	3¼x4⅜	9½	2½x3⅜
2	14⅜	3⅞x5⅛	10½	2¾x3¾	8¼	2¼x3

USE OF POLA-SCREEN AND FILTERS

The Kodak Pola-Screen makes possible the spectacular rendering of side-lighted subjects. The blue sky can be darkened greatly without changing other colors very much. Because it absorbs surface reflections on rocks, leaves, wood, water, etc., the Kodak Pola-Screen increases color saturation, adding richness. For distant scenes with clear sun at the side or overhead, it will reduce light bluish haze. Exposure is two and one-half times that for normal exposure of a side-lighted subject—f/4 for an average subject in sunlight with Kodachrome Film, Daylight Type.

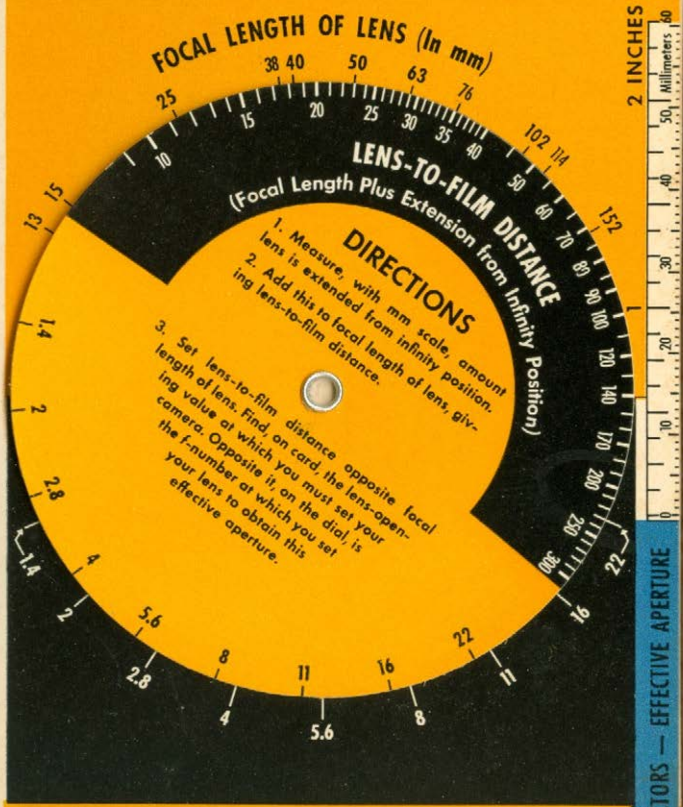
Filters for Black-and-White Film. Scenic pictures which include blue sky are usually improved by using the yellow Kodak K3 Filter. Spectacular dark skies result from the red Kodak Wratten A Filter. Nearby faces against a sky are sometimes improved by using the Kodak Wratten X-1 Filter.

SETTINGS FOR BLACK-AND-WHITE FILMS IN SUNLIGHT

CINE-KODAK FILM	No Filter	Kodak Filter CK-3	Kodak Wratten Filters G	A	X-1
Super-X	f/16	f/11	f/8-11	f/5.6	f/8
Super-XX	f/22	f/16	f/11-16	f/8	f/11

Care of Film. Both exposed and unexposed film should be protected from heat and humidity. Never put a loaded camera or film in the glove compartment or on the rear shelf of a car in summertime. Load the camera out of direct sunlight to avoid fogging edges of the film. Do not leave exposed film in a magazine or in a camera too long after exposure; quality will deteriorate. Never use a processing return reel to take up film in your camera; holes in its side will let in light when you unload the camera, and will fog the film. Do not re-seal can of exposed film with tape.

EFFECTIVE APERTURE COMPUTER



DIRECTIONS

1. Measure, with mm scale, amount lens is extended from infinity position.
2. Add this to focal length of lens, giving lens-to-film distance.
3. Set lens-to-film distance opposite focal length of lens. Find, on card, the lens-opening value at which you must set your camera. Opposite it, on the dial, is the f-number at which you set your lens to obtain this effective aperture.

Set lens opening from scale on card; not one on dial.

FACTORS — EFFECTIVE APERTURE

CHECK LIST. REMEMBER, WHEN SHOOTING:

Follow these steps every time you make movies. You soon will form habits that will make correct camera settings almost automatic.

Speed of the Camera (usually 16)
Aperture of the lens
Focus
Expose the scene
Rewind the motor.

Get Action in Your Films. Concentrate on the "doings" of man rather than his works, scenics, or other static subjects.

Think "Story," Not Pictures. Movies are for telling stories. Tell your story with your movie camera.

Plan Your Shooting. Think ahead one or two shots so they will be related to the one you are shooting.

Have a Reason for Each Shot. Does it show the location, what's happening, who is concerned, why something happened? Having a reason m[illegible]es your movies interesting.

Get Variety in Your [illegible] Shots. Vary the distance and angle at which you shoot. Cut short easily-understood shots; lengthen those which take time to grasp.

Panoram Sparingly. When panoraming seems the only way to take a scene, do it s-l-o-w-l-y. Panoram from a point of least to a point of greatest interest; hold it briefly.

Get Plenty of Close-Ups. Close-ups lend emphasis, add variety, build interest. On the screen, they give that larger-than-life-size view we see nowhere else.

Break Up Long Actions. A long single action (cutting down a tree, loading a boat, weaving a rug) is deadly in a long single shot from an unchanged viewpoint. Broken into varied, shorter shots, it will be much more interesting.

"Edit" in the Camera. Shoot about as you experience things in real life; from a distance to show "where," nearer for "what," close-up for showing "who" and "why."

IF LOST, PLEASE RETURN TO:

Name ______________________________

Address ______________________________

City ____________________ State ______________

NOTES

For more detailed information on movie making, get a copy of "How To Make Good Movies" from your Kodak Dealer. More than 350,000 copies sold; the best seller of any book on making movies.

OWNER'S NOTES

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